

REMARKS

Favorable reconsideration of this application, for the reasons noted hereinafter, is respectfully requested.

Claims 1-5, 7-15, 17, 18, 21, 22 and 26-29 are currently pending.¹ No claims have been added or amended by this response. Thus, no new matter has been added.

In the outstanding Office Action, Claims 1-5, 7-15, 17, 18, 21, 22 and 26-29 were rejected under 35 U.S.C. § 103(a) as unpatentable over Muratani (U.S. Patent Application Publication No. 2006/0023913) in view of Ehrmann Patin et al. (U.S. Patent No. 7,013,023; hereinafter "Patin");² and Claims 8 and 9 were rejected under 35 U.S.C. § 103(a) as unpatentable over Muratani in view of Patin and Shimizu (U.S. Patent No. 6,971,012).³

Applicants acknowledge with appreciation the courtesy of Examiner Hoang in granting an interview in this case with Applicants' representatives on January 12, 2011, during which time the issues in the outstanding Office Action were discussed as substantially summarized hereinafter and also in the Interview Summary. During the interview, it was agreed that Patin fails to teach or suggest the claimed correlator operable "to iteratively increase a number of parts of the partial codeword used," as recited in independent Claim 1.

In response to the rejection of Claims 1-5, 7-15, 17, 18, 21, 22 and 26-29 under 35 U.S.C. § 103(a) over Muratani in view of Patin, Applicants respectfully request reconsideration of the rejection and traverse the rejection as discussed next.

¹ Applicants note that the Office Action lists Claim 24 as pending. However, this claim has been cancelled.

² Applicants note that the summary of the rejection under 35 U.S.C. § 103(a) on page 2 of the Office Action omits Claims 5, 8, 9, 15 and 26-29 which the Office Action also appears to reject as unpatentable over Muratani in view of Patin. Also, Applicants note that the Office Action incorrectly lists canceled Claim 24 in the summary and canceled Claim 23 in the rejection as rejected over these references.

³ Applicants are at a loss as to the actual rejection of dependent Claims 8 and 9 as the Office Action appears to take contradictory positions. For example, on page 7, the Office Action appears to assert that Muratani discloses the subject matter of Claims 8 and 9, but on pages 8 and 9, the Office Action admits that Muratani fails to disclose features of Claims 8 and 9.

Independent Claim 1 is directed to a data processing apparatus including, *inter alia*:

...a recovery processor operable to recover a partial code word composed of at least one of the plurality of parts of the code word from at least one of the plurality of corresponding units of the marked material item, and

a correlator operable to generate for the marked material item a dependent correlation value by correlating the partial code word with a corresponding partial stored code word that is a part of a whole stored code word, and

a detector operable to determine whether the whole stored code word is present in the marked material item based on the dependent correlation value for the partial code word exceeding a predetermined threshold, wherein

when the dependent correlation value does not exceed the predetermined threshold, ***the correlator is operable to iteratively increase a number of parts of the partial code word used, to increase information quantity of the recovered partial code word,***

each time the information quantity of the partial code word is increased, the correlator is operable to generate a dependent correlation value by correlating the partial code word having increased information quantity with a corresponding partial stored code word, the iterative increasing of the information quantity of the partial code word continuing until the whole code word is recovered by the recovery processor, and correlated with the whole stored code word by the correlator, or the predetermined threshold exceeded.

Regarding the rejection of Claim 1, page 4 of the Office Action acknowledges that Muratani fails to disclose that “when the dependent correlation value does not exceed the predetermined threshold, ***the correlator is operable to iteratively increase a number of parts of the partial codeword used,*** to increase information quantity of the recovered partial codeword,” as recited in Claim 1. In an attempt to cure this deficiency, the Office Action cites to Patin.

Patin describes a system for protection against transmission errors in the transmission of digital images in which a known watermark is inserted on a noisy channel.⁴ The system of Patin is directed towards determining how many decoding iterations need to be carried out upon reception of the digital images in order to guarantee good quality by using a watermark inserted in the image as a pilot.⁵ At each iteration or half-iteration, the watermark is extracted and compared with its perfect version known to the receiver.⁶ That is, in the system of Patin, ***the whole watermark is always extracted at every step***. A number of parts of the watermark used in each comparison remains the same.

In contrast, Claim 1 recites that when the dependent correlation value does not exceed a predetermined threshold, “the correlator is operable to ***iteratively increase a number of parts of the partial codeword used***, to increase information quantity of the recovered partial codeword.”

Thus, as agreed upon during the interview, Patin fails to teach or suggest the claimed correlator which iteratively increases a number of parts of the partial codeword.

Accordingly, Applicants respectfully submit that a *prima facie* case of obviousness has not been established and the rejection of Claim 1, and all similarly rejected dependent claims, should be withdrawn.

Regarding the rejection of independent Claims 11, 17 and 21, those claims recite features similar to those of independent Claim 1. Thus, independent Claims 11, 17 and 21, and all claims depending thereon, patentably distinguish over Muratani and Patin at least for reasons analogous to those described above.

Regarding the rejection of dependent Claims 8 and 9, Applicants note that Claims 8 and 9 are dependent from independent Claim 1, and are believed to be patentable for at least

⁴ See column 1, lines 8-14 of Patin.

⁵ See column 1, lines 56-57 and column 3, lines 19-22 of Patin.

⁶ See column 11, lines 14-16 of Patin.

the reasons described above. Further, Applicants respectfully submit that Shimizu fails to cure any of the above-noted deficiencies of Muratani and Patin.

Accordingly, the pending claims are believed to be in condition for formal allowance. An early and favorable action to that effect is respectfully requested.

Should the Examiner deem that any further action is necessary to place this application in even better form for allowance, the Examiner is encouraged to contact Applicants' undersigned representative at the below-listed telephone number.

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